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ABSTRACT

During the 1989-90 academic year, the New York City school system's Chapter 1 Clinical and Guidance program achieved its goals of identifying and alleviating the emotional and social problems that interfere with students' academic performance. During the year, the program served 6,203 Chapter 1 eligible students from 150 nonpublic schools. In addition the program initiated a "walk-over" service for computer aided instruction students, and, in 1989-90, 839 students from 5 nonpublic schools were served. Finally, staff development training was implemented as proposed. One in seven students served by the program were in the English-as-a-Second-Language program. When language was a barrier to communication, program staff often got a speaker of the student's native language to write notes to or call the student's parents, or they referred the student to an outside agency. During 1989-90, the Clinical and Guidance program initiated parent effectiveness groups to help parents learn new ways to handle problems, understand their children, and find support from other parents. In general, despite their social and emotional problems, students in all instructional programs and in all grades made statistically significant mean gains from pretest to posttest, meeting the program's criteria for success. Student behavior improved. Expansion of the computer assisted instruction program is recommended for program improvement. (LLL)

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OREA Report

CHAPTER 1
CLINICAL AND GUIDANCE PROGRAM
1989-90

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CHAPTER 1
CLINICAL AND GUIDANCE PROGRAM
1989-90

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CHAPTER 1 CLINICAL AND GUIDANCE PROGRAM
1989-90

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EXECUTIVE SUMMARY

THE CHAPTER 1 CLINICAL AND GUIDANCE PROGRAM

The Chapter 1 Clinical and Guidance program provided diagnostic and counseling services to students enrolled in Chapter 1 nonpublic school remedial instructional programs--Corrective Reading, the Reading Skills Center, Corrective Mathematics, and English as a Second Language (E.S.L.). Program staff included two coordinators, two field supervisors, 21 social workers, 62 guidance counselors, 43 psychologists, and one psychiatrist. During 1989-90, the program was funded at approximately $6.7 million and served 6,203 students from 150 nonpublic schools. Its goal was to alleviate the emotional and social problems that interfere with a student's ability to profit from remediation.

DELIVERY OF SERVICES

On July 1, 1985, the Supreme Court ruled that instruction by public school staff on the premises of nonpublic schools was unconstitutional. Since the 1986-87 school year, students have received Chapter 1 services at public schools, leased neutral sites, mobile instruction units (M.I.U.s), and nondenominational schools. Since 1987-88, Chapter 1 services have been provided via computer-assisted instruction (C.A.I.). Students work in computer labs in the nonpublic school, and teachers monitor their progress and provide instructional assistance via modems from a Board of Education administrative center. While public schools, leased neutral sites, M.I.U.s, and nondenominational schools include space for clinical and guidance services, the Supreme Court ruling prohibited the provision of clinical and guidance services at C.A.I. sites. Since 1988-89, the program has served C.A.I. students through a "walkover" program at nearby public schools.

PROGRAM OBJECTIVES

The objectives for the 1989-90 Clinical and Guidance program were:

- Students were expected to make statistically significant mean gains on standardized and program-developed tests administered by the Chapter 1 instructional programs.
- All Clinical and Guidance students were expected to show a statistically significant mean difference on the program-developed Behavior Checklist.

EVALUATION METHODOLOGY

Program documents, data retrieval forms, interviews of program staff, and analyses of standardized and program-developed tests were the data for the evaluation of the program. The impact of the program on student achievement in instructional programs was determined by evaluating students' performance on the tests. The impact of the program on student behavior was determined by evaluating teachers' perceptions of their students' behavior as measured on the Behavior Checklist.

STUDENTS SERVED

More than 90 percent of participating students were in grades kindergarten through eight. In addition, the majority were enrolled in the largest instructional programs, Corrective Reading and Corrective Mathematics. Approximately 40 percent of the students in each of these programs received Clinical and Guidance services. Seventy percent of the Reading Skills Center students received services but less than one-third of the English as a Second Language students received them.

Almost two-thirds of the students received services for the first time in 1989-90; one-quarter received them for a second year; and almost 10 percent received them for three or more years. Twenty-four percent of the students in their first year in the program were recommended for an additional year of program participation.

Chapter 1 teachers referred the largest number of students to the program (86 percent). Almost one-half of all referrals (44 percent) were for educational handicaps such as learning disabilities. The next most frequent reasons were behavior problems (13 percent) and family problems (11 percent).

IMPLEMENTATION

Providing Clinical and Guidance Services to Students

The staff provided services to individual students, groups of students, or students and parents. A student could receive individual, group, and/or family counseling. More than three-quarters of the students received help from an individual staff member, and nearly one-quarter of the students had needs that required a team approach. Students met with professional staff for an average of 13 sessions.

Serving C.A.I. Students

During the 1989-90 school year, 839 C.A.I. students from five nonpublic schools were involved in the walk-over program. Arrangements were made with the nearest public school, and

Clinical and Guidance sessions were held in a space designated by the school. A counselor or a social worker picked up and returned students to the nonpublic school. In addition, staff communicated with C.A.I. students via electronic blackboards and an after-school hotline. When necessary, they scheduled after school and weekend sessions.

Serving E.S.L. Students

One in seven students served by the program were in the English as a Second Language program. When language was a barrier to communication, program staff often got a speaker of the student's native language to write notes to or call the student's parents, or they referred the student to an outside agency that could provide services to the student in her or his own language.

Increasing Parental Involvement

During the 1989-90 school year, the program initiated parent effectiveness groups in order to help parents learn new ways to handle problems, understand their children, and find support from each other. The groups were led by a program staff team which included a psychologist and a guidance counselor. Groups met at a neutral site, for two to twelve sessions, and usually in the late afternoon or evening. Approximately 40 parents participated in the program.

Parental response to parent effectiveness groups was overwhelmingly positive. On evaluation forms developed by the Clinical and Guidance program, all respondents expressed their gratitude and appreciation for the groups. Some parents stated that they had found better ways to communicate with their children, and others said that they were glad to have had a place to go where they could share their problems with other parents.

Staff Development

Staff development included formally organized workshops, regularly scheduled meetings of clinical and guidance staff with field supervisors, and intraborough meetings of program staff. During the 1989-90 school year, 44 staff development training workshops were held. They served as a forum for sharing ideas and addressing specific problems raised by individual staff members. The workshops were attended by program staff and Chapter 1 teachers, and sometimes by parents and students. The workshops included presentations on topics such as depression in children, child abuse, and problems of single parent families.

STUDENT ACHIEVEMENT IN INSTRUCTIONAL PROGRAMS

Students' scores on tests administered by instructional programs were indirect measures of the success of the program in identifying and alleviating the emotional and social problems of students. In general, students in the instructional programs made statistically significant mean gains from pretest to

posttest on standardized and program-developed tests, meeting the program's criteria for success. Overall, effect sizes were large and educationally meaningful. However, tenth grade students in the Corrective Reading program and fourth, fifth and sixth grade students in the English as a Second Language program did not make statistically significant mean gains.

IMPROVEMENT IN STUDENT BEHAVIOR

On the Behavior Checklist, mean differences for all grades were statistically significant, meeting the program criterion for success. Effect sizes for all grades and overall were large and educationally meaningful. These results suggest that student behavior improved and the program achieved its goals of identifying and alleviating the emotional and social problems of students.

RECOMMENDATIONS

Based on the evaluation findings and other information presented in the report, the following recommendations are made:

- Expand the C.A.I. walk-over program to include all C.A.I. sites, so that Clinical and Guidance services are available to all C.A.I. students who need them.
- Explore ways of expanding parent effectiveness groups to the parents of additional students; for example, using M.I.U.s for after school and evening parent meetings.
- Increase the program's bilingual staff to increase the capacity of the program to serve E.S.L. students.

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I. INTRODUCTION

PROGRAM PURPOSE

The Chapter 1 Clinical and Guidance program provides diagnostic and counseling services to nonpublic school students who participate in Chapter 1 instructional programs--Corrective Reading, Reading Skills Center, English as a Second Language (E.S.L.), and Corrective Mathematics (see Appendix A). Services are available by referral to any student enrolled in an instructional program. The goal of the Clinical and Guidance program is to identify and alleviate the emotional and/or social problems that may interfere with students' academic performance.

ELIGIBILITY

Students are eligible for Chapter 1 services if they live in a targeted attendance area and score below a designated cutoff point on state-mandated tests or standardized reading tests. Most nonpublic schools participating in Chapter 1 instructional programs use either the Scott-Foresman Test or the Comprehensive Test of Basic Skills (C.T.B.S) as their screening instrument.

Nonpublic school students must score at or below a specific grade equivalent to be eligible for Chapter 1 instructional programs. The grade equivalent is a calculation of the grade placement in years and months of students for whom a certain score is typical. It represents the level of work a student is capable of doing. However, a ninth grade student who achieves a test score that is 11.6 grade equivalents does not belong in the eleventh grade; rather, the 11.6 grade equivalent score indicates

that the student scored as well as a typical eleventh grader would have scored on the ninth grade test. The designated cutoff point ranges from three months below grade level for students in first grade to two or more years below grade level for students in high school.

PROGRAM OBJECTIVES

The objectives for the 1989-90 Clinical and Guidance program were:

- Students were expected to make statistically significant mean gains on the standardized tests administered by the Chapter 1 instructional programs.
- E.S.L. students were expected to make a statistically significant mean gain on the program-developed Oral Interview Test (O.I.T.) administered by the Chapter 1 English as a Second Language program.
- All Clinical and Guidance students were expected to show a statistically significant mean difference on the program-developed Behavior Check'ist.

PROGRAM EVALUATION

The purpose of the 1989-90 evaluation by the Office of Research, Evaluation, and Assessment/Instructional Support Evaluation Unit (OREA/I.S.E.U.) was to describe the program and to assess its impact on student achievement. The following methods were used:

- interviews with program staff and review of documents describing program organization and funding, services provided, and staff development training;
- analyses of data retrieval forms that report information about grade placement, number of years in the program, participation in other Chapter 1 programs, reasons for referral, type of session, and number of contact hours;
- analyses of student scores on standardized reading, mathematics, and language skills tests;

- analyses of E.S.L. students' scores on the Oral Interview Test (O.I.T.); and
- analyses of students' scores on the Behavior Checklist.

SCOPE OF THE REPORT

The purpose of this report is to assess the implementation and effectiveness of the 1989-90 Chapter 1 Clinical and Guidance program. Program organization and implementation are described in Chapter II. Student academic achievement is discussed in Chapter III. Conclusions and recommendations are offered in Chapter IV. In addition, Appendix A briefly describes all Chapter 1 Nonpublic School Reimbursable Services for 1989-90.

II. PROGRAM ORGANIZATION AND IMPLEMENTATION

PROGRAM ORGANIZATION

Program Funding and Staff

During 1989-90, the Clinical and Guidance program was funded at approximately $6.7 million. Program staff included two coordinators, two field supervisors, 21 social workers, 62 guidance counselors, 43 psychologists, and one psychiatrist. The staff provided services to individual students, groups of students, and students and parents. A particular student could receive individual, group, and/or family counseling.

The Supreme Court Ruling and Program Organization Since 1985

On July 1, 1985, the Supreme Court ruled that instruction or counseling by public school staff on the premises of nonpublic schools affiliated with churches--local educational agencies' most common method of serving Chapter 1-eligible students from nonpublic schools--was unconstitutional.* As a result, alternative means for providing Chapter 1 services were devised.

Since the 1986-87 school year, eligible students attending church-affiliated nonpublic schools in New York City have received face-to-face classroom instruction at public schools, leased neutral sites, and mobile instruction units (M.I.U.s). Public school sites are designated classrooms in public schools, leased neutral sites are classrooms in public buildings such as

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*The ruling did not affect the provision of Chapter 1 services to nondenominational nonpublic schools.

community centers, and M.I.U.s are mobile classrooms parked outside the school being served. Students are bused or otherwise escorted from their nonpublic school to the Chapter 1 site for face-to-face classroom instruction.

In 1987-88, Chapter 1 services were expanded to provide remedial instruction to some nonpublic school students via computer-assisted instruction (C.A.I.). C.A.I. sites are classrooms in nonpublic schools used exclusively for Chapter 1 computer-assisted instruction. Chapter 1 teachers are not present at computer-assisted instruction sites. Instead, they monitor student progress through the curriculum and provide instructional assistance via modems from a Board of Education administrative center. At C.A.I. sites, noninstructional technicians handle problems with the equipment and maintain order and safety.

Public schools, leased neutral sites, and M.I.U.s include space for clinical and guidance services. C.A.I. sites do not include space for clinical and guidance services. Therefore, during the 1988-89 school year, the program initiated a "walk-over" service for C.A.I. students, who now "walk-over" to nearby public schools to receive counseling and guidance.

STUDENTS SERVED

During the 1989-90 school year, 6,203 students from 150 nonpublic schools were served by the Clinical and Guidance program. Almost two-thirds of the students received clinical and guidance services for the first time in 1989-90, nearly one-

quarter received them for a second year, and almost ten percent had received them for three or more years (see Table 1).

Reflecting the focus of Chapter 1 instructional programs, the program served many more elementary than secondary school students (see Table 1). More than 90 percent of participating students were in grades kindergarten through eight; less than six percent were in grades nine through twelve; 71 percent were in grades two through six.

The majority of students referred to the Clinical and Guidance Program were enrolled in the two largest instructional programs, Corrective Reading and Corrective Mathematics. Approximately forty percent of the students in each of these programs were referred for Clinical and Guidance services. Seventy percent of the Reading Skills Center students were referred to the program, but only one-third of the E.S.L. students were referred to the program (see Table 2).

Nearly three-quarters of the students who received clinical and/or guidance services were enrolled in only one instructional program. More than one-third of the students were enrolled in the Corrective Reading program, and nearly one-fifth of the students were enrolled in the Corrective Mathematics program. Thirteen percent of the students were enrolled in the English as a Second Language program, but only two percent were enrolled in the Reading Skills Center. In addition, roughly one-quarter were enrolled in more than one instructional program (see Table 3).

TABLE 1

Student Participation in the Clinical and Guidance Program by Grade and Number of Years in the Program, 1989-90

Grade	Total		Number of Years in the Program[a]					
			1		2		3 or more	
	N	%	N	%	N	%	N	%
K	74	1.2	72	97.3	2	2.7	-	-
1	488	7.9	390	79.9	90	18.4	8	1.6
2	979	15.8	775	79.4	178	18.2	23	2.4
3	957	15.4	633	66.1	271	28.3	53	5.5
4	1,003	16.2	575	57.5	300	30.0	125	12.5
5	824	13.3	465	56.4	235	28.5	124	15.0
6	665	10.7	359	54.1	181	27.3	124	18.7
7	425	6.9	224	53.0	117	27.7	82	19.4
8	275	4.4	151	54.9	75	27.3	49	17.8
9	149	2.4	141	94.6	8	5.4	-	-
10	120	1.9	100	83.3	18	15.0	2	1.7
11	60	0.9	46	76.7	12	20.0	2	3.3
12	23	0.4	16	69.6	6	26.1	1	4.3
ungraded	161	2.6	139	86.3	12	7.5	6	3.7
Total	6,203	100.0	4,086	65.9	1,505	24.3	599	9.7

[a] Data on grade was missing for 13 students.

- Almost two-thirds of the students were in their first year of the program.
- The largest numbers of students were in grades two through six.

TABLE 2

Number and Percentage of Students
in the Clinical and Guidance Program
by Participation in Chapter 1 Instructional Programs, 1989-90

Student Participation in Chapter 1 Instructional Program		Student Participation in the Clinical and Guidance Program	
Name of Program	Number of Students	Number of Students	Percentage of Students
Corrective Reading	9,619	3,889	40.4
Reading Skills Center	284	201	70.8
Corrective Mathematics	7,771	2,881	37.1
English as a Second Language	3,017	902	29.9
Total	20,691[a]	7873[a]	38.1

[a] Since some students participated in more than one program, the total number of students is based on duplicated counts.

- Seventy percent of the Reading Skills Center students were referred to the Clinical and Guidance program.
- Approximately forty percent of the students in Corrective Reading and Corrective Mathematics were referred to the Clinical and Guidance program.
- Approximately one-third of the E.S.L. students were referred to the Clinical and Guidance program.

TABLE 3

Number and Percentage of Students
in the Clinical and Guidance Program
by Participation in One or More Chapter 1 Instructional Programs,
1989-90

Name of Program	Number of Students	Percentage of Students
Enrolled in One Instructional Program:		
Corrective Reading	2,345	37.9
Reading Skills Center	139	2.2
Corrective Mathematics	1,198	19.4
English as a Second Language	825	13.3
Subtotal	4,507	72.8
Enrolled in Two Instructional Programs:		
Corrective Reading and Corrective Mathematics	1,544	24.9
Corrective Mathematics and Reading Skills Center	62	1.0
Corrective Mathematics and English as a Second Language	77	1.2
Subtotal	11,683	27.2
Total	6,190[a]	100.0

[a] Data on instructional program was missing for 13 students.

- Nearly three-quarters of the students were enrolled in one instructional program; roughly one-quarter were enrolled in more than one instructional program.
- More than one-third of the students were enrolled in the Corrective Reading program, and nearly one-fifth of the students were enrolled in the Corrective Mathematics program.

PROGRAM IMPLEMENTATION

Since counseling and guidance sessions could not be observed by OREA/I.S.E.U. evaluators, program documents, data retrieval forms, and interviews of program staff were the sources for the assessment of program implementation.

Providing Clinical and Guidance Services to Students

Chapter 1 teachers, nonpublic school teachers, and school administrators referred students to the program. In addition, students could enroll themselves. Chapter 1 teachers referred the largest number of students (86 percent).

Nearly one-half of all referrals (44 percent) were for educational handicaps. The next most frequent reasons for referral were behavior problems (13 percent) and family problems (11 percent). Twenty-four percent of the students in their first year in the program were recommended for an additional year of program participation.

Overall, students who received clinical and guidance services met with professional staff for an average of 13 sessions. Most students (78 percent) received help from an individual staff member--a guidance counselor, a psychologist, or a social worker. The mean number of sessions for students receiving individual counseling was roughly ten. However, nearly one quarter of the students had needs that required a team approach. Students whose needs required help from two or three different staff members participated in two or three times as

many meetings respectively as did students receiving assistance from an individual staff member (see Table 4).

Assessing Students' Needs with the Behavior Checklist

In a typical referral, the Chapter 1 teacher informally contacted a program staff member and identified a student who may be in need of assistance. Then, in order to get a clear picture of the student and to better assess his or her problems, the staff member held discussions with as many people as possible, particularly the principal and the classroom teacher. If, after these discussions, the staff member decided that the student needed Clinical and Guidance services, the Chapter 1 classroom teacher was asked to fill out the Behavior Checklist.

The Checklist is a 25-item questionnaire identifying behaviors that, if engaged in by the student, would interfere with successful academic performance. Teachers checked how often (never, seldom, half of the time, often, always) a particular behavior was exhibited by a student. After studying Behavior Checklist results, program staff assessed an individual student's needs by interviewing the student, studying the family history, and reviewing school records. Individual, group, or family counseling might then be initiated.

The checklist was also used to evaluate student participation in the program. It was expected that participation would lead to an improvement in students' behavior and attitude. At the end of the school year, Chapter 1 teachers reevaluated their students using the Behavior Checklist.

TABLE 4

Number and Percentage of Students Seen and the Mean Number of Sessions by Type of Service in the Clinical and Guidance Program, 1989-90

Type of Service	Students Seen		Mean Number of Sessions
	Number[a]	Percentage	
Individual Counseling:			
Guidance Counselor	3,691	59.6	10.2
Psychologist	519	8.4	10.3
Social Worker	599	9.7	10.4
Subtotal	4,809	77.6	NA
Team Counseling:			
Guidance Counselor and Psychologist	971	15.7	21.5
Guidance Counselor and Social Worker	95	1.5	21.4
Psychologist and Social Worker	212	3.4	23.4
Guidance Counselor, Psychologist, and Social Worker	108	1.7	34.3
Subtotal	1,386	22.4	NA
Total	6,195	100.0	13.0

[a] Data on type of service provided was missing for eight students.

- Almost sixty percent of the students were seen exclusively by a guidance councelor.
- Nearly one quarter of the students required a team approach.
- Students were seen for an average of 13 sessions.

Working with Students

Program staff used active and nonjudgmental listening techniques and tried to make sure that the student knew that the counselor was an ally. Working with students with different needs, program staff used different techniques to counsel and guide individual students. For example, with some students, it was necessary to deal directly with the student's issues, while with other students, it was necessary simply to help them identify their options rather than solve their problems. In some cases, students had problems communicating and counselors helped them decode or rephrase their statements. Finally, program staff used relaxation games to lessen student anxiety and thus increase the chance of identifying and alleviating students' problems.

Sometimes counselors faced difficulties communicating with students and their parents due to a language barrier. When language was a barrier, the counselor tried to get a speaker of the student's native language--usually an instructor who taught English as a Second Language--to write or call the student's home or otherwise offer assistance. When the counselor was unable to find a translator, the counselor would refer the student to an outside agency that could provide services to the student in her or his own language.

The staff tried to provide as much counseling as possible through the program, but on occasion there were problems that they felt could be better handled by an outside agency. In such cases, students and their families were referred to agencies such

as the Jewish Board of Family and Children's Services, the Bronx Center for Community Services, the Fordham/Tremont Community Mental Health Center, the School Phobia Clinic, the Hotline for Child Abuse, and the Hotline for Substance Abuse. In addition, counselors have referred students from single parent households to the Big Brothers and Big Sisters programs, and students in need of recreation have been referred to Boy's and Girl's Clubs.

Serving C.A.I. Students

During the 1989-90 school year, 839 C.A.I. students from five nonpublic schools were involved in the walk-over program. Arrangements were made with the nearest public school, and Clinical and Guidance sessions were held in a space designated by the school. A counselor or a social worker picked up and returned students to the nonpublic school. However, in an interview, staff mentioned that the use of a paraprofessional to escort students would greatly enhance the program's effectiveness because using staff to escort students takes time away from actual Clinical and Guidance work. The staff worked with students and parents individually and in groups. In addition, staff communicated with C.A.I. students via electronic blackboards and an after-school hotline and when necessary, scheduled after-school and weekend counseling and guidance sessions.

Increasing Parental Involvement

In order to help parents become more supportive of their children, the staff guided them through the process of accepting

help for their children, and offered ways to deal with teachers. During the 1989-90 school year, the program initiated parent effectiveness groups. The goals of the groups were to help parents learn new ways to handle problems, understand their children, and find support from other parents. The parent groups were led by a program staff team which included a psychologist and a guidance counselor. Groups met for two to twelve sessions, usually in the late afternoon or evening, at a neutral site such as a local hospital or Boy's Club. Approximately 40 parents participated in the program at the five sites.

The response from parents to this program was overwhelmingly positive. On an evaluation form developed and administered by the Clinical and Guidance program, some parents stated that through participation in the program they had found better ways to communicate with their children, and others said that they were glad to have had a place where they could share their problems with other parents. All respondents expressed their gratitude and appreciation for the program.

STAFF DEVELOPMENT TRAINING

Staff development training included formally organized workshops, regularly scheduled meetings of clinical and guidance staff with field supervisors, and intraborough meetings of program staff. During the 1989-90 school year, 44 staff development training workshops were held. They served as a forum for sharing ideas and addressing specific problems raised by individual staff members. The workshops were usually attended by

program staff and Chapter 1 teachers, and sometimes by parents and students.

The workshops included presentations by program staff and by guest speakers such as psychiatrists, psychotherapists, pediatricians, social workers, representatives of professional associations, New York City Police Department personnel, Victim Services Bureau staff members, Board of Education personnel, and members of community-based organizations such as Catholic Charities, the Kensington Counseling Center, the New Hope Guild, the School for Parents, and Spence Chapin Services. They also included demonstrations, role playing, "hands on" activities, and group discussions. Information booklets, fact sheets, and lists of reference materials were distributed to workshop participants.

Individual workshops focused on the particular concerns of program personnel and included analyses and interpretations of typical and actual problem cases. Presentations made by outside agencies included "The Intake Process, Waiting Lists, and Types of Cases" offered by Catholic Charities and "A Case Study of a Foster Child" presented by the Kensington Counseling Center. Other topics included:

- Domestic Violence and Its Effects on Children;
- Family Secrets, Family Violence, and Feelings;
- Peer Mediation Training Program on Conflict Resolution;
- Depression in Children;
- Developing a Guidance Workshop for Parents;
- The Parentified Child;

- Multicultural Issues in Counseling;
- Principles of Child Therapy: Loss, Mourning, and Clinical Interventions;
- Problems of Single Parent Families;
- Treatment for Behavioral Problems, Affect Disorders, and Other Disorders of Childhood; and
- Procedures for Reporting Child Abuse and Maltreatment.

III. STUDENT ACHIEVEMENT RESULTS

METHODS USED TO EVALUATE STUDENT ACHIEVEMENT

The impact of the Clinical and Guidance program on student achievement in reading, language skills, and mathematics was determined by comparing students' performance on standardized and program-developed tests against the program objective, a statistically significant mean gain between the pretest and the posttest. Pretests were administered in fall 1989, and posttests were administered in spring 1990. Test score data were analyzed for all students who were in a Chapter 1 program for at least five months and had complete test information. All Clinical and Guidance program students completed the program-developed Behavior Checklist, while the standardized tests taken by the students depended on their grade level and the instructional program they were in.

In this report, only certain tests for each instructional program were analyzed in order to provide a sample of achievement for clinical and guidance students. In the Corrective Reading program, analyses were conducted for students in grades two through twelve on the Reading Comprehension subtest of the California Achievement Test (CAT); in the Reading Skills Center program, for students in grades four through eight on the Reading Comprehension subtest of the CAT; and in the Corrective Mathematics program, for students in grades two through eight on the Concepts, Computation, and Applications subtests of the

Stanford Achievement Test (S.A.T). In the English as a Second Language program, analyses were conducted for students in kindergarten, first grade, and second grade on the listening subtest of the Language Assessment Battery (LAB); for students in grades three through eight, on the Reading subtest of the LAB and on the program-developed Oral Interview Test.

Standardized and Norm-Referenced Tests

On the standardized reading, language skills, and mathematics tests, students' raw scores were organized by grade and converted to normal curve equivalents (N.C.E.s),* and statistical analyses were carried out on the converted N.C.E. scores. Correlated *t*-tests were used to determine whether mean differences were statistically significant.

Statistical significance indicates whether the changes in achievement are real or occur by chance. However, achieving statistically significant mean gains does not address the issue of whether the mean gains are important to the students' educational development. For example, the importance of achieving statistically significant mean gains can be exaggerated for large groups of students because even small mean gains by large groups of students will generally be statistically

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*Normal curve equivalent scores are similar to percentile ranks but, unlike percentile ranks, are based on an equal-interval scale ranging from 1 to 99, with a mean of 50 and a standard deviation of approximately of 21. Because N.C.E. scores are equally spaced, mathematical and statistical calculations such as averages are meaningful; in addition, comparisons of N.C.E. scores may be made across different achievement tests.

significant. Similarly, the importance of not achieving statistically significant mean gains can be overstated for small groups of students because it is more difficult for small groups to achieve mean gains that are statistically significant. Thus, an effect size (E.S.)* is reported for each mean difference to indicate whether each mean gain or loss was educationally meaningful.

The Program-developed Oral Interview Test

Students in the E.S.L. program were given the Oral Interview Test (O.I.T.) to determine their language proficiency. The O.I.T. is an informal, criterion-referenced instrument designed to assess students' cognitive and linguistic skills. Students respond to pictorial stimuli, and altogether, they are tested on 30 pictures or questions. The O.I.T. includes a warm-up interview that is not scored, a section measuring oral comprehension, a section measuring the ability to repeat sentences, and a section measuring oral discourse or fluency. The test determines whether students are placed at a beginner, intermediate, or advanced level. Test results were organized by grade and are reported in raw-score units. Statistical analyses were carried out to determine whether mean differences were statistically significant, and an effect size was calculated for

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*The effect size, developed by Jacob Cohen, is the ratio of the mean gain to the standard deviation of the gain. This ratio provides an index of improvement irrespective of the size of the sample. According to Cohen, .2 is a small effect size, .5 is a moderate effect size, and .8 is a large effect size. Only effect sizes of .8 and above are considered educationally meaningful.

each mean difference to indicate whether each mean gain or loss was educationally meaningful.

The Program-developed Behavior Checklist

The Behavior Checklist is filled out by the student's teacher at the time of the referral and at the end of the school year. It is used to measure changes in behaviors and attitudes of individual program participants. The test consists of 25 items, and each item is an example of maladaptive behavior which, if engaged in by students, would interfere with successful academic performance. On a scale from 0 to 4, the teacher indicates how frequently a particular behavior is exhibited by a student (never = 0, seldom = 1, half of the time = 2, often = 3, always = 4).

The total score is the sum of the responses. Thus, higher scores indicate multiple behavioral problems and/or problems of greater intensity, and lower scores indicate fewer and/or less severe behavior problems. Participation in the program should lead to an improvement in students' behaviors and attitudes and significantly decreased scores from pretest to posttest. However, since the Behavior Checklist has never been administered to students not receiving clinical and guidance services, one cannot assert with absolute confidence that a cause and effect relationship exists between the program and the improvement in behavior noted in the checklist results.

Since the checklist is a program-developed instrument, reliability and validity were determined by calculating the

Cronbach alpha coefficient on responses for a randomly selected sample of 30 students. A high Cronbach alpha coefficient (.70 or higher) shows that the instrument is accurately measuring some characteristic of the people for which it is used and that individual items produce similar patterns of response for different people. The Cronbach alpha statistic for this sample was .90, indicating that the behavior checklist items were both homogeneous and valid.

Pretest and posttest scores on the Behavior Checklist were reported for 5,720 students, or 92 percent of the total number of students who participated in the program. Test results were organized by grade and are reported in raw-score units. Statistical analyses were carried out to determine whether mean differences were statistically significant, and an effect size was calculated for each mean difference to indicate whether each mean gain or loss was educationally meaningful.

ACHIEVEMENT FINDINGS

Corrective Reading Program

Table 5 presents data on student achievement on the Reading Comprehension subtest of the California Achievement Test (CAT) for students in grades two through twelve. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 5 shows that, in general, Corrective Reading Program students met the program objective.

TABLE 5

Mean N.C.E. Differences on the Reading Comprehension Subtest of the California Achievement Test for Clinical and Guidance Students in the Corrective Reading Program by Grade, 1989-90

Grade	N	Pretest		Posttest		Difference		Effect Size
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
2	444	19.0	11.7	33.5	12.8	14.5[a]	14.1	1.0
3	417	18.9	12.3	36.0	13.3	17.1[a]	13.3	1.3
4	511	20.6	11.5	35.8	10.5	15.2[a]	10.8	1.4
5	345	22.9	10.8	33.8	10.3	10.9[a]	8.5	1.3
6	277	24.7	13.1	36.5	10.8	11.7[a]	10.8	1.1
7	171	28.6	10.1	39.9	9.4	11.2[a]	8.9	1.3
8	89	29.4	11.2	39.4	10.5	10.0[a]	7.6	1.3
9	36	4.6	7.9	31.2	10.4	26.6[a]	14.2	1.9
10	27	3.0	6.0	29.3	16.3	26.4	17.9	1.5
11	2[b]	5.5	6.4	21.0	2.8	15.5	3.5	NA
12	1[b]	17.0	0.0	28.0	0.0	11.0	0.0	NA
Total	2,320	21.3	12.4	35.4	11.7	14.2[a]	12.0	1.2

[a] The mean difference was statistically significant at the $p \leq .05$ level.

[b] For grades eleven and twelve, the small numbers of students did not permit a valid test for statistical significance.

- The overall mean gain of 14.2 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 10.0 N.C.E.s for students in the eighth grade to 26.6 N.C.E.s for students in the ninth grade.
- Effect sizes were large and educationally meaningful.

Reading Skills Center Program

Table 6 presents data on student achievement on the Reading Comprehension subtest of the CAT for students in grades four through eight. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 6 shows that Reading Skills Center Program students met the program objective.

Corrective Mathematics Program

Table 7 presents data on the Total Score of the Stanford Achievement Test (S.A.T) for students in grades two through eight. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 7 shows that Corrective Mathematics Program students met the program objective.

English as a Second Language Program

Tables 8, 9, and 10 present the results of student achievement on various norm-referenced tests for students in the English as a Second Language Program. For each test or subtest, mean differences and effect size were calculated for each grade and for the overall score, and mean differences were measured against the program objective, a statistically significant mean gain. In general, the data show that English as a Second Language Program students met the program objective.

TABLE 6

Mean N.C.E. Differences on the Reading Comprehension Subtest of the California Achievement Test for Clinical and Guidance Students in the Reading Skills Center Program by Grade, 1989-90

Grade	N	Pretest		Posttest		Difference[a]		Effect Size
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
4	22	25.3	12.1	39.5	11.9	14.3	7.7	1.9
5	27	25.0	10.0	32.0	9.2	7.0	8.1	0.9
6	23	26.9	13.4	38.9	10.3	12.0	10.8	1.1
7	26	31.2	11.3	39.5	9.6	8.3	7.5	1.1
8	18	26.2	8.9	40.6	12.5	14.4	11.2	1.3
Total	116	27.0	11.4	37.8	10.9	10.8	9.4	1.1

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 10.8 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from seven N.C.E.s for students in grade five to 14.4 N.C.E.s for students in grade eight.
- Effect sizes were large and educationally meaningful.

TABLE 7

Mean N.C.E. Differences on the Total Score
of the Stanford Achievement Test
for Clinical and Guidance Students
in the Corrective Mathematics Program by Grade, 1989-90

Grade	N	Pretest		Posttest		Difference[a]		Effect Size
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
2	210	13.1	12.5	29.8	16.1	16.7	14.0	1.2
3	297	13.5	13.2	32.8	14.3	19.4	14.2	1.4
4	327	22.7	13.3	32.5	14.3	9.8	13.0	0.8
5	231	21.8	12.3	30.4	15.3	8.7	13.4	0.6
6	161	18.9	12.2	33.2	13.3	14.3	14.0	1.0
7	78	23.9	12.8	37.4	12.0	13.5	12.1	1.1
8	35	28.3	13.9	34.6	11.9	6.3	9.4	0.7
Total	1,339	18.8	13.6	32.2	14.5	13.5	14.1	1.0

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 13.5 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 6.3 N.C.E.s for students in the eighth grade to 19.4 for students in the third grade.
- With the exception of students in grades five and eight, effect sizes were large and educationally meaningful.

TABLE 8

Mean N.C.E. Differences on the Listening and Speaking Subtest of the Language Assessment Battery for Kindergarten, First Grade and Second Grade Clinical and Guidance Students in the English as a Second Language Program, 1989-90

Grade	N	Pretest		Posttest		Difference[a]		Effect Size
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
K	145	16.5	9.0	31.9	14.2	15.4	11.8	1.3
1	201	23.7	17.7	58.2	19.5	34.5	19.2	1.8
2	122	41.3	14.5	52.6	24.0	11.3	23.6	0.5
Total	468	26.0	17.5	48.6	22.5	22.5	21.3	1.0

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 22.5 N.C.E.s was statistically significant and represented a large effect size.
- Mean gains were 15.4 N.C.E.s for kindergarten students, 34.5 N.C.E.s for first grade students, and 11.3 N.C.E.s for second grade students.
- Effect sizes for students in kindergarten and first grade were large and educationally meaningful. The effect size for students in second grade was moderate.

TABLE 9

Mean N.C.E. Differences on the Reading Subtest
of the Language Assessment Battery
for Clinical and Guidance Students
in the English as a Second Language Program by Grade, 1989-90

		Pretest		Posttest		Difference		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
3	61	18.9	10.4	36.9	25.5	18.0[a]	19.9	0.9
4	12	16.1	27.0	37.9	40.1	21.8	31.2	0.7
5	15	9.3	5.7	19.2	26.0	9.9	24.2	0.4
6	17	19.3	19.0	25.9	15.4	6.6	18.5	0.4
7	6[b]	8.0	8.6	18.7	7.6	10.7	5.6	NA
8	1[b]	1.0	0.0	50.0	0.0	49.0	0.0	NA
Total	112	16.6	14.4	32.1	26.3	15.5[a]	21.7	0.7

[a] The mean difference was statistically significant at the $p \leq .05$ level.

[b] The small numbers of students did not permit a valid test for statistical significance.

- The overall mean gain of 15.5 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains ranged from 6.6 N.C.E.s for sixth grade students to 21.8 N.C.E.s for fourth grade students.
- The effect size for grade three was large and educationally meaningful. Effect sizes for students in grades four through six were small or moderate.

TABLE 10

Mean Raw-Score Differences on the Oral Interview Test
for Clinical and Guidance Students
In Grades Three through Eight
in the English as a Second Language Program by Grade, 1989-90

Grade	N	Pretest		Posttest		Difference		Effect
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
3	85	13.6	5.5	44.6	32.1	31.0[a]	31.7	1.0
4	16	9.8	7.9	48.7	31.0	38.9[a]	26.4	1.5
5	26	12.2	7.8	39.1	29.3	26.8[a]	27.5	1.0
6	30	12.3	7.4	44.4	28.9	32.1[a]	30.0	1.1
7[b]	10	6.2	5.6	32.9	31.1	26.7	28.6	NA
8[b]	3	8.7	3.2	21.3	26.3	12.7	29.3	NA
Total	170	12.3	6.7	43.0	30.8	30.8[a]	29.9	1.0

[a] Mean differences were statistically significant at the $p \leq .05$ level.

[b] The small numbers of students did not permit a valid test for statistical significance.

- The overall gain of 30.8 raw-score points was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 12.7 raw-score points for students in the eigth grade to 38.9 raw-score points for students in the fourth grade.
- Effect sizes for students in grades three through six were large and educationally meaningful.

Behavior Checklist

Table 11 presents data on the Behavior Checklist. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 11 shows that Clinical and Guidance program students met the program objective.

COMPARISON WITH PAST YEARS

For comparisons of student achievement on selected tests with that in previous years, the number of students, mean gain from pretest to posttest, standard deviation of the mean gain, and effect size are reported. During the 1987-88 school year, the criteria for success was a mean gain of five N.C.E.s on standardized tests or a statistically significant increase in raw scores on program-developed tests. However, in 1988-89, the criteria for success were changed. Now, in all instructional programs and on all tests, the program objective was a statistically significant mean gain.

Corrective Reading Program, 1987-88 to 1989-90

Table 12 presents data on the Reading Comprehension Subtest of the CAT for students in grades two through twelve. In 1987-88, the overall mean gain of 4.4 N.C.E.s did not meet the program criterion for success. In 1988-89, the mean gain increased to 12 N.C.E.s, and in 1989-90, it increased to 14.2 N.C.E.s. These gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 12).

TABLE 11

Mean Raw-Score Differences on the Behavior Checklist for Clinical and Guidance Program Students, 1989-90[a]

Grade	N	Pretest		Posttest		Difference[b]		Effect Size
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
K	69	40.6	16.7	31.4	15.0	9.2	7.7	1.2
1	473	47.6	16.6	36.7	14.6	10.9	9.3	1.2
2	944	44.3	16.6	34.5	14.1	9.8	9.3	1.1
3	906	44.7	16.2	34.5	13.8	10.2	9.0	1.1
4	950	43.8	15.6	34.0	13.9	9.8	9.5	1.0
5	780	43.3	16.7	32.9	14.0	10.4	9.5	1.1
6	626	42.0	16.4	31.3	13.9	10.7	8.7	1.2
7	402	42.2	16.2	31.7	14.5	10.5	9.6	1.1
8	268	41.3	16.2	30.6	14.2	10.7	10.2	1.0
9	130	44.0	13.0	37.5	13.5	6.5	4.8	1.4
10	102	45.5	14.7	39.4	14.3	6.1	5.9	1.0
11	50	46.1	13.3	38.8	12.7	7.3	5.8	1.3
12	20	55.5	16.4	44.6	12.8	10.9	7.3	1.5
Total	5,720	43.9	16.3	33.9	14.2	10.1	9.2	1.1

[a] A decrease from pretest to posttest indicates improvement in behavior and attitude.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean difference of 10.1 raw-score points was statistically significant and represented a moderate effect size.
- Mean differences ranged from 6.1 raw-score points for students in grade ten to 10.9 raw-score points for students in grades one and twelve.
- Effect sizes were large and educationally meaningful.

TABLE 12

Mean N.C.E. Differences
on the Reading Comprehension Subtest of the CAT
for Corrective Reading Program Students
in Grades Two through Twelve
in the Clinical and Guidance Program,
1987-88 to 1989-90

Year	Number of Students	Mean Gain[a]	Standard Deviation	Effect Size
1987-88	2,765	4.4	15.8	0.3
1988-89	2,511	12.0	12.9	0.9
1989-90	2,320	14.2	12.0	1.2

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- In 1987-88, the overall mean gain of 4.4 N.C.E.s did not meet the program criterion for success.
- In 1988-89, the mean gain increased to 12 N.C.E.s, and in 1989-90, it increased to 14.2 N.C.E.s. These gains were statistically significant and met the program's criteria for success.
- The effect size for the 1987-88 school year was small, but in 1988-89 and 1989-90, the effect sizes were large and educationally meaningful.

Reading Skills Center Program, 1987-88 to 1989-90

Table 13 presents data on the Reading Comprehension Subtest of the CAT for students in grades four through eight. In 1987-88, the mean gain of 2.3 N.C.E.s did not meet the program criterion for success. In 1988-89, the mean gain increased to 8.5 N.C.E.s, and in 1989-90, it increased to 10.8 N.C.E.s. These gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 13).

Corrective Mathematics Program, 1987-88 to 1989-90

Table 14 presents data on mathematics achievement. For 1987-88, data are for students in grades one through twelve on the SESAT, S.A.T., and TASK; beginning in 1988-89, data are for students in grades two through eight on the total score of the S.A.T. Mean gains decreased slightly from 15.6 N.C.E.s in 1987-88 to 14.1 N.C.E.s in 1988-89 to 13.5 N.C.E.s in 1989-90. In all three years, these gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 14).

English as a Second Language Program, 1987-88 to 1989-90

Kindergarten and First Grade. Table 15 presents data on norm-referenced language tests. For 1987-88, data are for the Test of Basic Experience (TOBE); beginning in 1988-89, data are for the Listening and Speaking subtest of the LAB. For students in kindergarten, mean gains increased slightly from 15 N.C.E.s in 1987-88 to 15.3 N.C.E.s in 1988-89 to 15.4 N.C.E.s in 1989-90.

TABLE 13

Mean N.C.E. Differences
on The Reading Comprehension Subtest of the CAT
for Reading Skills Center Program Students
in the Clinical and Guidance Program,
1987-88 to 1989-90

Year	Number of Students	Mean Gain[a]	Standard Deviation	Effect Size
1987-88	167	2.3	14.0	0.2
1988-89	107	8.5	10.0	0.9
1989-90	116	10.8	9.4	1.1

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- In 1987-88, the mean gain of 2.3 N.C.E.s did not meet the program criterion for success.
- In 1988-89, the mean gain increased to 8.5 N.C.E.s, and in 1989-90, it increased to 10.8 N.C.E.s. These gains were statistically significant and met the program's criteria for success.
- The effect size for 1987-88 was small; effect sizes for the 1988-89 and 1989-90 school years were large and educationally meaningful.

TABLE 14

Mean N.C.E. Differences on the Total Score of the S.A.T. for Corrective Mathematics Program Students in the Clinical and Guidance Program, 1987-88 to 1989-90[a]

Year	Number of Students	Mean Gain[b]	Standard Deviation	Effect Size
1987-88	2,217	15.6	13.6	1.1
1988-89	1,772	14.1	13.5	1.0
1989-90	1,339	13.5	14.1	1.0

[a]For 1987-88, data are for students in grades one through twelve on the SESAT, S.A.T. and TASK. Beginning with the 1988-89 school year, data are for students in grades two through eight on the total score of the S.A.T.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains decreased slightly from 15.6 N.C.E.s in 1987-88 to 14.1 N.C.E.s in 1988-89 to 13.5 N.C.E.s in 1989-90. In all three years, these gains were statistically significant and met the program's criteria for success.

- Effect sizes for all three years were large and educationally meaningful.

TABLE 15

Mean N.C.E. Differences on Norm-Referenced Tests for E.S.L. Students in Kindergarten and First Grade in the Clinical and Guidance Program, 1987-88 to 1989-90[a]

Year	Number of Students	Mean Gain[a]	Standard Deviation	Effect Size
Kindergarten:				
1987-88	110	15.0	15.3	1.0
1988-89	142	15.3	16.2	0.9
1989-90	145	15.4	11.8	1.3
First Grade:				
1987-88	176	10.8	13.7	0.8
1988-89	208	8.5	13.9	0.6
1989-90	201	34.5	19.2	1.8

[a] For 1987-88, data are for the Test of Basic Experience (TOBE); in 1988-89 and 1989-90, data are for the Listening and Speaking subtest of the LAB.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- For students in kindergarten, mean gains increased slightly from 15 N.C.E.s in 1987-88 to 15.3 N.C.E.s in 1988-89 to 15.4 N.C.E.s in 1989-90. These gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes.
- For students in first grade, mean gains for 1987-88 and 1988-89 were relatively stable at 10.8 N.C.E.s and 8.5 N.C.E.s, respectively. In 1989-90, the mean gain increased substantially to 34.5 N.C.E.s. These gains were statistically significant and met the program's criteria for success.
- The effect size for first grade students in 1988-89 was moderate; effect sizes for 1987-88 and 1989-90 were large and educationally meaningful.

In all three years, these gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 15).

For students in first grade, mean gains for 1987-88 and 1988-89 were relatively stable at 10.8 N.C.E.s and 8.5 N.C.E.s, respectively. In 1989-90, the mean gain increased substantially to 34.5 N.C.E.s. However, these different magnitudes may reflect the different instruments used. Nevertheless, these gains were statistically significant and met the program's criteria for success. In 1987-88 and 1989-90, the mean gains represented large and educationally meaningful effect sizes; in 1988-89, the mean gain represented a moderate effect size (see Table 15).

Second Grade. Table 16 presents data on norm-referenced language tests. For 1987-88, data are for the Auditory subtest of the S.A.T.; in 1988-89, for the Reading and Writing subtests of the LAB; and in 1989-90, for the Listening subtest of the LAB. The mean gain increased slightly from 8.2 N.C.E.s in 1987-88 to 19.5 N.C.E.s in 1988-89 and then decreased to 11.3 N.C.E.s in 1989-90. However, these differences in mean gains may reflect the different instruments used. Nevertheless, in all three years, these gains were statistically significant and met the program's criteria for success. In 1987-88 and 1989-90, the mean gains represented moderate effect sizes; in 1988-89, the mean gain represented a large and educationally meaningful effect size (see Table 16).

TABLE 16

Mean N.C.E. Differences on Norm-Referenced Tests for E.S.L. Students in Second Grade in the Clinical and Guidance Program, 1987-88 to 1989-90[a]

Year	Number of Students	Mean Gain[b]	Standard Deviation	Effect Size
1987-88	136	8.2	13.1	0.6
1988-89	184	19.5	24.1	0.8
1989-90	122	11.3	23.6	0.5

[a] For 1987-88, data are for the Auditory subtest of the S.A.T.; in 1988-89, for the Reading and Writing subtests of the LAB; and in 1989-90, for the Listening subtest of the LAB.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- The mean gain increased slightly from 8.2 N.C.E.s in 1987-88 to 19.5 N.C.E.s in 1988-89 and then decreased to 11.3 N.C.E.s in 1989-90. These gains were statistically significant and met the program's criteria for success.

- In 1987-88 and 1989-90, the mean gains represented moderate effect sizes; in 1988-89, the mean gain represented a large and educationally meaningful effect size.

Third through Eighth Grade. Table 17 presents data on the Reading subtest of the LAB. Mean gains increased slightly from 9.5 N.C.E.s in 1987-88 to 9.7 N.C.E.s in 1988-89 to 15.5 N.C.E.s in 1989-90. In all three years, these gains were statistically significant and met the program's criteria for success. However, in all three years, the mean gains represented moderate effect sizes (see Table 17).

Table 18 presents data on the Oral Interview Test. In 1987-88 and 1988-89, mean gains remained stable at 6.6 N.C.E.s, but in 1989-90, the mean gain increased substantially to 30.8 N.C.E.s. Nevertheless, in all three years, these gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 18).

Clinical and Guidance Program, 1987-88 to 1989-90

Table 19 presents data on the Behavior Checklist. During this period, overall mean gains remained basically stable, decreasing slightly from 11.7 N.C.E.s in 1987-88 to 10.7 N.C.E.s in 1988-89 to 10.1 N.C.E.s in 1989-90. However, in all three years, these gains were statistically significant, met the program's criteria for success, and represented large and educationally meaningful effect sizes (see Table 19).

TABLE 17

Mean N.C.E. Differences
on the Reading Subtest of the Language Assessment Battery
for E.S.L. Students in Grades Three through Eight
in the Clinical and Guidance Program,
1987-88 to 1989-90

Year	Number of Students	Mean Gain[a]	Standard Deviation	Effect Size
1987-88	160	9.5	13.3	0.7
1988-89	174	9.7	13.7	0.7
1989-90	112	15.5	21.7	0.7

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains increased slightly from 9.5 N.C.E.s in 1987-88 to 9.7 N.C.E.s in 1988-89 to 15.5 N.C.E.s in 1989-90. These gains were statistically significant and met the program's criteria for success.

- In all three years, the mean gains represented moderate effect sizes.

TABLE 18

Mean Raw-Score Differences
on the Oral Interview Test
for E.S.L. Students
in the Clinical and Guidance Program,
1987-88 to 1989-90[a]

Year	Number of Students	Mean Gain[b]	Standard Deviation	Effect Size
1987-88	527	6.6	3.5	1.9
1988-89	522	6.6	4.5	1.5
1989-90	170	30.8	29.9	1.0

[a] In 1987-88, data are for students in kindergarten through eighth grade; in 1988-89, for students in kindergarten, first, and third through eighth grades; in 1989-90, for students in third through eighth grade.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- In 1987-88 and 1988-89, mean gains remained stable at 6.6 N.C.E.s, but in 1989-90, the mean gain increased substantially to 30.8 N.C.E.s. These gains were statistically significant and met the program's criteria for success.

- In all three years, these gains represented large and educationally meaningful effect sizes.

TABLE 19

Mean Raw-Score Differences
on the Behavior Checklist
in the Clinical and Guidance Program,
1987-88 to 1989-90

Year	Number of Students	Mean Difference[a]	Standard Deviation	Effect Size
1987-88	5,110	11.7	10.0	1.2
1988-89	5,415	10.7	9.6	1.1
1989-90	5,720	10.1	9.2	1.1

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains remained basically stable, decreasing slightly from 11.7 N.C.E.s in 1987-88 to 10.7 N.C.E.s in 1988-89 to 10.1 N.C.E.s in 1989-90. However, these gains were statistically significant and met the program's criteria for success.

- Effect sizes were large and educationally meaningful.

IV. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

During the 1989-90 school year, the Clinical and Guidance program achieved its goals of identifying and alleviating the emotional and social problems that interfere with students' academic performance. During the year, the program served 6,203 Chapter 1-eligible students from 150 nonpublic schools. In addition, the program initiated a "walk-over" service for C.A.I. students and, in 1989-90, 839 students from five nonpublic schools were served. Finally, staff development training was implemented as proposed.

E.S.L. Students

One in seven program students was in the E.S.L. program (902 out of 6,203 students), and the program was not always able to serve the needs of these students directly. For example, when language was a barrier to communication, staff tried to get a speaker of the student's native language to write notes to or call the student's parents. When they could not find a translator, counselors referred the student to an outside agency that could provide services to the student in her or his own language.

Parental Involvement

During 1989-90, the Clinical and Guidance program initiated parent effectiveness groups to help parents learn new ways to handle problems, understand their children, and find support from

other parents. Approximately 40 parents participated in the program at five neutral sites. The groups were greatly appreciated by participating parents and have become a valuable part of the program.

Student Achievement in Instructional Programs

In general, despite their social and emotional problems, students in all instructional programs and in all grades made statistically significant mean gains from pretest to posttest, meeting the program's criteria for success. However, tenth grade students in the Corrective Reading program and fourth, fifth and sixth grade students in the English as a Second Language program did not make statistically significant mean gains. In addition, the small numbers of students in grades eleven and twelve in the Corrective Reading program and in grades seven and eight in the English as a Second Language program did not permit a valid test for statistical significance. Students' scores on tests administered by instructional programs, however, are indirect measures of the success of the program in identifying and alleviating the emotional and social problems of students.

Improvement in Student Behavior

Student performance as perceived by their Chapter 1 teachers and reported on the Behavior Checklist is a direct measure of the success of the program. On the checklist, mean differences by grade and overall were statistically significant, meeting the program criterion for success. Effect sizes for all grades and overall were large and educationally meaningful.

One cannot assert with absolute confidence that a cause and effect relationship exists between the program and improvement in student behavior noted in checklist results. However, 86 percent of the students were referred to the program by Chapter 1 teachers, and these same teachers completed the checklist at the time of referral and at the end of the program. The uniformity of perceived improvement in the behavior of students suggests that the program achieved its goals.

RECOMMENDATIONS

The following recommendations for program improvement are made:

- Expand the C.A.I. walk-over program to include all C.A.I. sites, so that Clinical and Guidance services are available to all C.A.I. students who need them.
- Explore ways of expanding parent effectiveness groups to the parents of additional students; for example, using M.I.U.s for after school and evening parent meetings.
- Increase the program's bilingual staff to increase the capacity of the program to serve E.S.L. students.

APPENDIX A

Brief Description of Chapter I Nonpublic School Reimbursable Programs, 1989-90

Chapter I Nonpublic School Reimbursable programs provide supplementary, individualized instruction to students attending nonpublic schools in New York City. Students are eligible for Chapter I services if they live in a targeted attendance area and score below a designated cutoff point on State-mandated standardized reading tests.

On July 1, 1985, the Supreme Court held that instruction by public school teachers on the premises of nonpublic schools--local educational agencies' most common method of serving Chapter I-eligible children--was unconstitutional. As a result, alternative methods for providing Chapter I services to eligible nonpublic school students were devised. Students attending nonpublic schools now receive Chapter I services at mobile instruction units, public school sites, leased neutral sites, and nondenominational schools and via computer-assisted instruction in designated classrooms in nonpublic schools.

CORRECTIVE READING PROGRAM

The Corrective Reading program provides instruction in reading and writing. The goal is to enable students to reach grade level in reading. During 1989-90, the program served 9,689 students in grades one through twelve in 177 nonpublic schools. The total included 3824 students receiving computer-assisted instruction and 4647 students receiving face-to-face instruction. In addition, 1,218 students received a combination of services. Program staff included one coordinator, four field supervisors, and 87 Corrective Reading teachers. Instruction was provided to small groups of students, one to five days a week, in sessions lasting 20 to 60 minutes. Chapter I funding totaled $10.7 million.

READING SKILLS CENTER PROGRAM

The Reading Skills Center program provides instruction in reading and writing to students in grades four through eight. The goal is to enable students to reach grade level in reading. During 1989-90, the program served 284 students from six nonpublic schools. Program staff included a coordinator and eight teachers. Instruction was provided to small groups of about five students, three to five days per week, for sessions lasting from 45 to 60 minutes. Chapter I funding totaled $667,572.

CORRECTIVE MATHEMATICS PROGRAM

The Corrective Mathematics program provided instruction in mathematics. The goals are to deepen students' understanding of mathematical concepts and to improve their ability to perform computations and solve problems. During 1989-90, the program served 7,771 students attending 160 nonpublic schools. The total included 3,871 students receiving face-to-face instruction and 3,891 students receiving computer-assisted instruction. Program staff included a coordinator, one field supervisor, and 71 Corrective Mathematics program teachers. Instruction was provided to small groups of students, one to five days per week, in sessions ranging from 45 to 60 minutes. Chapter I funding totaled more than $7.4 million.

ENGLISH AS A SECOND LANGUAGE

The English as a Second Language program provides intensive English language instruction to limited English proficient students. The goal of the program is to help students gain the listening, speaking, reading, and writing skills necessary to improve their performance in school. During 1989-90, the program served 3,017 students in kindergarten through eighth grade in 77 nonpublic schools. The total included 2,286 receiving face-to-face instruction, and 731 students receiving computer-assisted instruction. In addition, a Read-Along component provided some students with tape recorders, storybooks, and audio tapes for home use. Program staff included a coordinator, two field supervisors, and 37 teachers. Instruction was provided to small groups of students two to three days a week in sessions ranging from 30 to 60 minutes. Chapter I funding totaled $3.4 million.

CLINICAL AND GUIDANCE PROGRAM

The Clinical and Guidance program provides diagnostic and counseling services to students enrolled in Chapter I nonpublic school programs--Corrective Reading, Reading Skills Center, Corrective Mathematics, and English as a Second Language. The goal of the program is to alleviate emotional or social problems that interfere with the students' ability to profit from remedial education. During 1989-90, the program served 6,203 students from 150 nonpublic schools. The staff included two coordinators, two field supervisors, 62 guidance counselors, 43 psychologists, one psychiatrist, and 21 social workers. Chapter I funding totaled $6.7 million.